

1-1-1999

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### Recommended Citation

Rygiel, Judith. "Technology Across the Border, New England and the Southern New Brunswick Cotton Industry, 1880-1884." *Maine History* 38, 3 (1999): 210-223. <https://digitalcommons.library.umaine.edu/mainehistoryjournal/vol38/iss3/4>

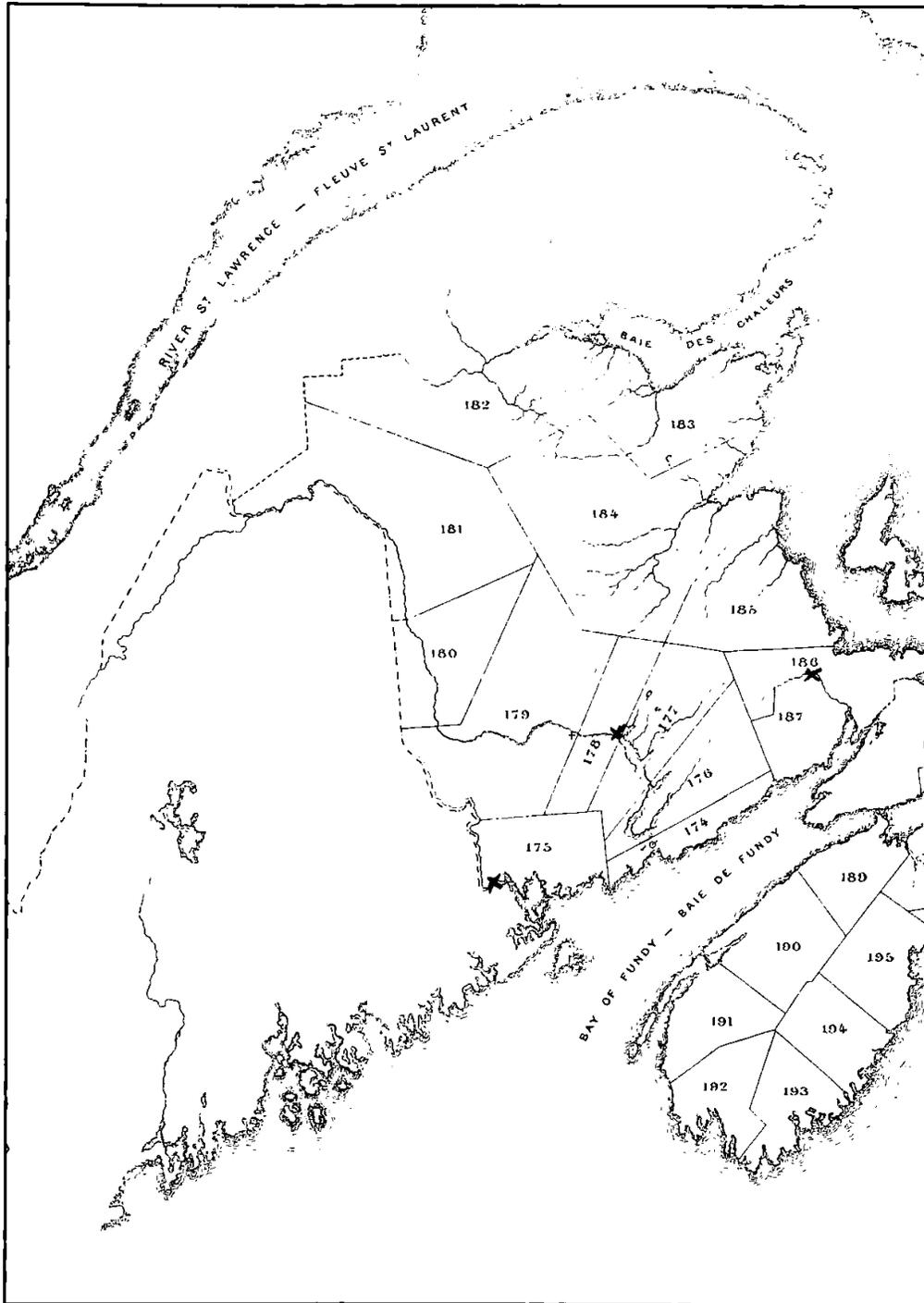
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JUDITH RYGIEL

TECHNOLOGY ACROSS THE BORDER  
NEW ENGLAND AND THE SOUTHERN  
NEW BRUNSWICK COTTON INDUSTRY,  
1880-1884

*New England textile entrepreneurs, mill architects, and consultants had a direct influence on cotton textile production in southern New Brunswick in the early 1880s. In an advisory capacity, they offered advice on capitalization, equipment, labor models, product, and management strategies, vastly affecting the community landscape in Maritime textile towns. This paper examines the distinct influences of New England's textile entrepreneurs on three southern New Brunswick cotton mills built in the early 1880s. Judith Rygiel is a doctoral student in history at Carleton University in Ottawa, Canada. She grew up in Moncton, New Brunswick, near a cotton mill. Her 1998 M.A. thesis, "Women of the Cloth-Weavers in Charlotte and Westmorland Counties, New Brunswick, 1871-1891," is a comparative study of women's work in the St. Croix and the Moncton cotton mills.*

Movement across the international border between Maine and New Brunswick is, and always has been fluid. In the late nineteenth century, an era that saw a constant exchange of skilled and unskilled labor, raw materials, capital, and technology, New Brunswick textile promoters turned to existing models of industrial community development in New England, and in some cases Maine. This was most evident in cotton textiles, a newcomer in Maritime Canada in the early 1880s, in which few



A relative newcomer to the textile industry in the early 1880s, New Brunswick adopted the New England model of industrialization in Milltown (on the Maine-New Brunswick border), Marysville (on the St. John River near the center of the province), and Muncton (furthest north and east). Technology, capital, and expertise from Maine thus played a key role in changing the economic landscape of New Brunswick. *Census of Canada, 1871.*

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of the province's entrepreneurs and promoters had expertise. By contrast, the textile businesses had flourished in New England for nearly a half century.<sup>1</sup> Thus Massachusetts and Maine played a major role in changing the industrial landscape of New Brunswick. A study of these technology, labor, and capital transfers demonstrates the broadening scope of the New England model of industrialization, and the trans-border dynamics of building an industry around the locational resources in hand.

The fluidity of the Maine-New Brunswick border exchange was most notable in two small industrial towns on the St. Croix River: Milltown, New Brunswick, and Milltown, Maine. The New Brunswick Milltown, a small community of 1,600 people, became host to the St. Croix Cotton mill. Across the St. Croix River was Milltown, Maine, an almost identical community of sawmills and wooden houses with a similar ethnic mix of Irish, English, and Scottish, a similar occupational composition, and a similar trade flow. Downriver on the St. Croix were the sister cities of Calais, Maine, and St. Stephen, New Brunswick. Indeed, through most of the nineteenth century the lumber trade of the St. Croix River Valley was the major employer in all four communities.<sup>2</sup> Although they had no comparable "sister cities," cross-border connections were also critical to the Gibson Cotton in Marysville and the Moncton Cotton Manufacturing Company in Moncton. New England textile entrepreneurs, with a half-century experience in the cotton textile trade, gave expert advice on capitalization and provided models for labor, technology, mill architecture and indeed community development. In all three communities, business leaders formed committees to inspect New England cotton mills and consult with owners before submitting final proposals to their communities. The Milltown, New Brunswick, supporters – merchants, lumbermen, and professional people from both sides of the St. Croix River – held public meetings in Milltown, St. Stephen, and Calais, presenting their findings on mill technology, construction costs, potential investors, and sources of industrial equipment. Albert H. Neil, one of the promoters from Calais, went on fact-finding missions on behalf of the four St. Croix communities in the early 1880s,

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visiting mills in Ontario, Quebec, and the “West” (Massachusetts). Neil not only questioned various seasoned millowners, but he sought information on construction and furnishing costs from industrial equipment manufacturers, including one of the oldest and best-known firms in New England, the Lowell Machine Shop.<sup>3</sup>

The Massachusetts mill owners suggested a cost of twenty to twenty-eight dollars per spindle and a minimum of 10,000 spindles. A mill of 20,000 spindles, they advised, would be the most cost effective to run, with a workforce of about 400 employees. A mill this size could provide a diversified mix of products, thus stabilizing profits. Some New England contacts, including a president of the Merchant’s Association of Boston, indicated a willingness to invest in New Brunswick mills.<sup>4</sup> The Lowell Company suggested a cost of \$160,000 for a basic mill making one kind of cloth; more diversified mills might increase costs by an additional 25 percent, plus the costs of transporting the machinery. The Lowell Company offered building plans and competent mechanics to set up a mill – if the New Brunswick promoters would pay their board.<sup>5</sup>

Backers of the proposed Milltown mill hired D.M. Thompson, an engineer from Providence, Rhode Island, in early 1880 to inspect the mill sites, assess the waterfall power on the St. Croix River, and address local investors. Thompson was a qualified consultant, having just returned from inspecting textile mills in Great Britain, Europe, Canada, and the southern States. He informed a gathering of investors in St. Stephen that the average cotton mill in America earned a dividend of 25 percent, and some more. “Men could not find a better investment for their capital.”<sup>6</sup> Neil also consulted G. P. Whitman, a mill builder and furnisher from the Amery Mill in Manchester, New Hampshire, conversant with all aspects of mill construction and furnishing – from “the foundation up.”<sup>7</sup> Whitman also recommended a mill of 20,000 spindles, at a cost of twenty dollars per spindle.

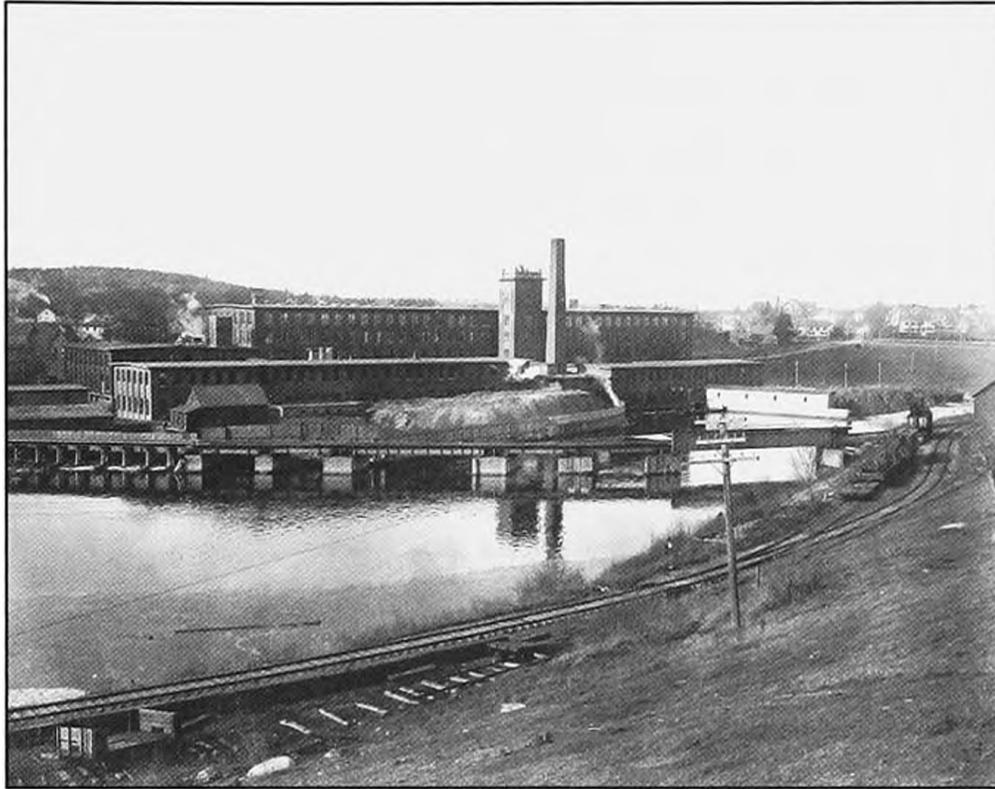
The mill on the St. Croix River, now named the St. Croix Cotton mill, gained additional support from David Main, editor

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and owner of the *St. Croix Courier* in St. Stephen. In 1879, Main ran feature editorials extolling light manufacturing to replace the failing lumber business and provide new job opportunities for residents on both sides of the river.<sup>8</sup> Main reproduced a letter from F.J. Robinson, a former Charlotte County resident who had left for greener pastures in Lowell, Massachusetts. There were, Robinson noted, a “number of young men and women in different parts of New England from the St. Croix Valley who would be glad to return home and honour their native place with their presence and usefulness and gladden the home circle.” A Maine developer proclaimed the advantageous of the St. Croix region: an “ample supply of water, cheap lumber and labour, good transportation facilities, a river not subject to sudden or extensive freshets, little or no floating ice, a fair farming country, a healthy climate and a home market for manufactured goods.”<sup>9</sup>

Local entrepreneurs in communities on both sides of the St. Croix River initiated subscription campaigns to cover the proposed capital costs. They appealed to civic pride, local loyalties, kinship networks, and regional solidarity to raise funds. The St. Croix Valley, they understood, could not possibly raise the \$400,000 necessary to build the mill, but they calculated that if the valley raised a third to a fourth of the cost, the remainder would come from outside the local community. By raising a portion of the money themselves, the communities would show people abroad that “the businessmen of St. Stephen have confidence in the undertaking and are willing to invest their own money.”<sup>10</sup>

The initial stock subscription for the St. Croix mill involved 8,000 shares at fifty dollars each. Merchants, professionals, and lumber mill owners in the vicinity made up about 30 percent of the 126 subscribers, with the balance from small property owners, artisans, sawmill employees, laborers, and farmers. The town of Milltown purchased 600 shares, making the campaign truly a community endeavour. The four local St. Croix Valley communities raised \$200,000 of the projected capitalization by the end of May 1881.<sup>11</sup> Promoters then looked further afield for funding and financial advice.



The St. Croix Cotton Mill in Milltown, New Brunswick, was built in 1880-1882 at Salmon Falls, just over the border from Maine. Its proximity to the border demonstrates the close ties between state and province. *Photo courtesy of Provincial Archives of New Brunswick, #P11-87.*

New Englanders had good reason to invest in Canadian cotton mills. The new tariffs imposed on manufactured goods by the Canadian government in 1879 allowed raw cotton and cotton yarns to enter Canada duty free, but changed a duty on manufactured cotton goods from 17.5 percent to 28.7 percent in an effort to encourage entrepreneurs to manufacture cotton cloth domestically.<sup>12</sup> By investing in mills across the border, Americans could circumvent the tariff while still supplying the eastern Canadian markets with cotton cloth. The Milltown Town Council added further incentive by offering a generous ten-year exemption on municipal taxation to potential mill developers, and even a cash bonus to encourage immediate construction of a cotton mill.<sup>13</sup>

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Numerous potential building sites were made available along the St. Croix River at reasonable prices.

Among the various consultants and potential investors, Amos Lockwood of Waterville, Maine, was by far the most influential. Lockwood, a cotton manufacturer, not only inspected and reported on the potential of the St. Croix sites, but he also promised to raise \$200,000 for the project. In October 1880 Lockwood himself became one of the mill's first major investors.<sup>14</sup> Lockwood had considerable expertise in the New England cotton business, both as a mill architect and a cotton manufacturer. He had been in the textile business since the 1840s as technical advisor, builder, and investor. He and his partner, Stephen Greene, advertised that their Boston firm, Lockwood-Greene, "specialized [in] the plans, specifications and superintendence for the construction, equipment and organization of cotton, woollen, worsted and other textile mills."<sup>15</sup> Lockwood was also a major shareholder in the prosperous Saco-Lowell Water Power Machine Shop, manufacturers of textile machinery in Saco. The Saco-Lowell Machine Shop had been in business since 1836 and was allied with the Boston Associates' machine shop at Lowell, Massachusetts.<sup>16</sup>

In addition to their contacts with Lockwood, the St. Croix promoters met with Mr R.H. Dunn, his manager and agent at the Waterville mill, who confirmed the benefits a cotton mill might offer a small town like Milltown. The residents of Waterville had purchased half of the \$600,000 stock subscriptions during the 1872 building campaign for their cotton mill. The mill paid a dividend of 8 percent to the stockholders every six months, and Dunn estimated that real estate values had doubled and tripled in Waterville. Lockwood's mill employed 375 people, and its owners were preparing to double its capacity.<sup>17</sup> A testimonial from Waterville stressing the mill's benefits to the community did not fall on deaf ears.

Lockwood also put the Milltown promoters in touch with Lewis Dexter of Providence, Rhode Island. Dexter also promised a \$200,000 investment and suggested that the capitalization for the mill be increased to a million dollars.<sup>18</sup> Dexter insisted on



Using his experience at this Waterville textile mill, Maine cotton manufacturer Amos Lockwood helped promote the mill at Milltown. The venture was jointly funded by New Brunswick and New England financiers and recruited operatives, mechanics, and managers on both sides of the border. *Whittemore, THE CENTENNIAL HISTORY OF WATERVILLE (1902).*

a \$30,000 bonus to firm up the deal, and within two days St. Croix Valley promoters raised the required bonus, including \$15,000 from the town council.<sup>19</sup> Lockwood further consulted his financial colleagues in Rhode Island for the balance of the investment funds.

In 1880 Lockwood-Greene received the contract to build the St. Croix cotton mill on Salmon Falls near Milltown. All the design work and the contractors for the St. Croix mill came from the United States. These included Lockwood's engineering and architectural firm, along with general contractor R.E. Patterson of Lewiston, and Master Mason S.E. Grant. Even the bricks for the building came from the American side of the St. Croix River.<sup>20</sup> Mill construction and its spin-off projects, such as new housing, provided a much-needed impetus to local employment, made somewhat precarious by declines in the lumber trade.

The Lockwood-Greene Company also acted as brokers for the textile equipment. They purchased a 16,000-spindle mule-

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spinning machine from Curtis & Sons of Manchester, England, and a 10,000-spindle ring-spinner from the Whitin Machine Company of Whitinsville, Massachusetts. Lockwood also had connections with the Lewiston Machine Company in Maine, which supplied 736 looms for plain and fancy goods. Other mill machinery came from the Holyoke Machine Company in Massachusetts.<sup>21</sup>

Given the fluidity of the Maine-New Brunswick border, workers from both sides took advantage of the new employment opportunities in Milltown. Americans, in fact, had been recruiting mill workers in New Brunswick for thirty years. An 1882 advertisement in the *New Brunswick Reporter*, for instance, appealed to young New Brunswick women on behalf of an Amesbury, Massachusetts, cotton mill: "Come with me and you will be gaining an independent livelihood, receive good wages, and if you are careful, lay up money, and at the same time get out of this hum-hum-drum life and see the world."<sup>22</sup> Now labor flowed in the opposite direction, as the St. Croix mill expected to hire about 500 workers, two-thirds of them women. By advertising higher wages, the mill lured fifty skilled operatives from the Bates mill in Lewiston. The mill hired all its managers, overseers, and second hands from mills in New England and particularly from Maine, where Amos Lockwood had his factories. The first superintendent of the mill, Louis Dexter Jr., was the son of one of the major American investors. According to the *Eastport Sentinel*, by 1889 more than 300 unskilled workers crossed the border daily from Calais and Milltown, Maine, to work in the New Brunswick cotton mill.<sup>23</sup>

The St. Croix mill operated under a modified Rhode Island, or Slater type of management. Families, including some with as many as six members, labored daily at the numerous machines. As the company provided no accommodations, some families commuted to the mill, while others took rooms at local boarding houses or with relatives living nearby on either side of the border.<sup>24</sup>

New England's influence was particularly apparent in capitalization and management of the Milltown project. Only about

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20 percent of the total capital — \$1 million — came from local sources; New England investors supplied the rest. Four of the five members of the first board of directors for the St. Croix mill were Americans, reflecting the division between foreign and local funding. Three of the directors were the principal American investors — Amos Lockwood of Waterville and Lewis Dexter and Charles D. Owen from Rhode Island. L.G. Downes from Calais and James Murchie from St. Stephen were the only two local investors on the board.<sup>25</sup>

The cotton mills in Marysville and Moncton also received assistance from New England entrepreneurs, but not to the same extent as the St. Croix mill. In Moncton, business leaders invited a consultant, Fred Bosson, to meet with them in November 1881 about a proposed mill project. Bosson, an architect and engineer from Boston, was the son of a director of the Lawrence Textile Company. Both father and son acted as expert consultants on manufacturing cotton and wool in the United States. Fred Bosson, the *Moncton Daily Times* reported, was “conversant with everything relating to the cotton business, including the construction of the mill, the selection of machinery, and the general management of the work.” Bosson and his partner, John Oldfield of Boston, acquired English-made textile machinery, such as mule spinners, ring spinners, and looms, to be used in the Moncton Cotton mill.<sup>26</sup>

The Moncton Cotton Manufacturing Company received its letters of incorporation in 1882. As with the St. Croix mill, local business people bought subscriptions to finance the initial capital costs, but Moncton investors were more conservative in their financing strategies. They too envisioned \$400,000 as the net capital cost for a cotton mill, with half the amount needed to undertake construction. The Moncton company offered 4,000 shares at \$100 each in November 1881. The initial campaign raised \$120,000 in the first four days. Both the *Moncton Daily Times* and the *Monetary Times*, a national business paper, indicated that American and British investors might cover the rest of the capitalization.<sup>27</sup> The Moncton mill, a fully integrated organization with spinning and weaving departments in the same

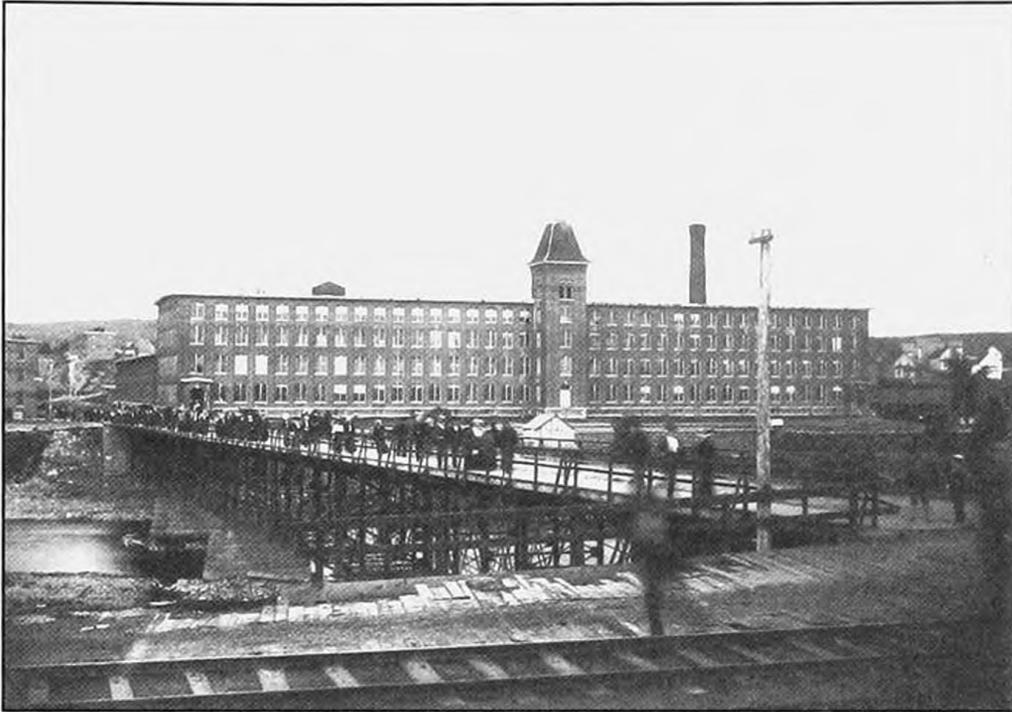
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premises, also operated on the Rhode Island model. The firm employed about 150 hands, mostly French-Acadians recruited from the local area but also a few workers from outside the immediate vicinity. The overseers came from England rather than America.<sup>28</sup>

The Gibson mill, opening in Marysville in 1884, was the last in the expansion of the cotton industry into New Brunswick. Lumber baron Alexander Gibson purchased the hamlet of Rankin Mills in 1862 to gain cutting rights on the Nashwaak River. In the early 1880s he renamed the sawmill hamlet Marysville after his wife and, with little knowledge of the cotton industry, laid plans for a new town, including a cotton mill, 100 brick tenement houses, and a three-story boarding house for employees. Gibson financed the entire project, adding a millinery store, a barber shop, a dry goods store, a post office, and a hotel. He had previously built a school, a Methodist Church, a parsonage, and 24 double houses.<sup>29</sup> A paternalistic overseer, Gibson went as far as banning taverns and public houses within his jurisdiction.

Gibson commissioned Lockwood-Greene, the company that built the St. Croix mill, to prepare plans for a 60,000 spindle cotton mill and the houses. The four-story building would be somewhat longer than the Milltown site and would employ 600 hands. The five-acre mill site would include, in addition to the mill itself, a dye house, a machine shop, and a wood planing and turning mill. Gibson also purchased brick-making machines to supply the building materials.<sup>30</sup>

Gibson planned the mill operation carefully. During construction in 1884, he sent C.H. Hatt, his right-hand man, on a tour of the larger mills in Maine, Rhode Island, and New York.<sup>31</sup> Gibson hired foremen and overseers from some of these mills. John Hatch, foreman of the weaving room, formerly worked in Lewiston, while the spinning overseer, W.E. Cheswell, had previous experience in cotton mills in Fall River, Massachusetts, Saco, Maine, and in New Brunswick. Although many of the skilled workers were American, unskilled labor came from the local area. About two thirds were women and children.<sup>32</sup>



The Gibson mill at Marysville was the last of the large textile mills built in New Brunswick on the New England model. Lumber baron Alexander Gibson ran the mill – and the town, which he named after his wife. Like the St. Croix financiers, Gibson commissioned Lockwood-Greene company to prepare plans for the 60,000 spindle mill. *Photo courtesy of Provincial Archives of New Brunswick.*

Although all three Maritime mills sought advice from New England mill experts, their final appearance was decidedly individual. The American architectural firm, Lockwood-Greene, constructed both the Milltown and Marysville mills, while Bosson and his partner John Oldfield built the much smaller Moncton mill. While both the Moncton mill and the Milltown mill were joint-stock companies, the latter depended heavily on money from Maine, Rhode Island, and Massachusetts. Gibson's Marysville mill resembled the Rhode Island model not only in management, but in its labor relations, with the mill-village configuration of tenement houses and independent ownership. Although the Milltown mill was most heavily influenced by New England, builders of all three consulted with American experts before construction.

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Throughout its history the textile industry has been incredibly mobile. A few decades after its founding in Great Britain, machine-based textile production gained a foothold in southeastern New England, then came to full flower in Waltham and Lowell in the years after the War of 1812. From Massachusetts, the industry spread up the fall line to Manchester, New Hampshire, and Saco, Lewiston, and Waterville, Maine. In the 1880s, the mills moved again – south into the Carolinas and north to the St. Lawrence Valley and Maritime Canada. In the twentieth century, the industry spread overseas, to begin the process of industrialization anew. The links between Maine and three New Brunswick mill towns demonstrate the dynamics of this movement. Without the advice of New England consultants, the New Brunswick towns would not have gained their mills as easily; nor would they have found the capital and skilled labor to enhance their operations. As the New Brunswick example shows, the rise and decline of Maine’s own textile economy was but one phase in a process that is continental – indeed global – in scope.

## NOTES

<sup>1</sup>Between 1881 and 1884, three cotton mills were built in Nova Scotia in Halifax, Windsor, and Yarmouth, and four in New Brunswick in Moncton, Saint John, Marysville, and Milltown.

<sup>2</sup>Peter Delottinville, “Trouble in the Hives of Industry: The Cotton Industry Comes to Milltown, New Brunswick, 1879-1892,” *Historical Papers* (Montreal, 1990): 101-02.

<sup>3</sup>George Sweet Gibb, *The Saco-Lowell Shops: Textile Machinery Building in New England, 1813-1949* (Cambridge: Harvard University Press, 1950), p. 649.

<sup>4</sup>*St. Croix Courier*, February 5, 1880.

<sup>5</sup>*Ibid.*

<sup>6</sup>*St. Croix Courier*, March 4, 1880.

<sup>7</sup>*St. Croix Courier*, “History of the Mill,” June 23, 1881.

<sup>8</sup>*St. Croix Courier*, July 1879.

<sup>9</sup>*St. Croix Courier*, April 22, November 8, 1880.

<sup>10</sup>*St. Croix Courier*, June 23, 1881.

<sup>11</sup>Delottinville, “Trouble,” note 10, p. 104.

<sup>12</sup>A.B. McCullough, *The Primary Textile Industry in Canada: History and Heritage* (Ottawa: Supply and Services Canada, 1992), p. 70.

<sup>13</sup>*St. Croix Courier*, November 8, 1880; Delottinville, “Trouble,” p. 105.

<sup>14</sup>Delottinville, “Trouble,” p. 104.

<sup>15</sup>Amos Lockwood (1811-1884) invited Stephen Greene, a civil engineer, into his architectural firm in 1879 and named him a full partner in 1879. Dana Johnson, “Historic Marysville,” in *Canadian Heritage Parks Canada* (1993): 730.

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<sup>16</sup>Gibb, *Saco-Lowell Shops*, pp. 112, 391.

<sup>17</sup>*St. Croix Courier*, February 19, 1880, March 4, 1880.

<sup>18</sup>Delottinville, "Trouble," p. 105.

<sup>19</sup>*St. Croix Courier*, November 8, 1880.

<sup>20</sup>*St. Croix Courier*, June 23, 1881.

<sup>21</sup>*St. Croix Courier*, June 23, 1881; *Monetary Times*, June 3, 1881.

<sup>22</sup>*New Brunswick Reporter*, November 15, 1882.

<sup>23</sup>*Calais Times*, November 3, 1882, quoted in Peter Delottinville, "The St. Croix Cotton Manufacturing Company and Its Influence on the St. Croix Community, 1880-1892," M.A. thesis, Dalhousie University, 1979, p. 150. The 1891 Canadian Census aggregate data listed 631 employees at the St. Croix cotton mill. In the nominative schedules, only 425 people reported working at the mill. The other 206 employees possibly lived in Maine and reported their employment on American census information. See *Eastport Sentinel*, April n.d., 1882, in Harold Davis, *An International Community on the St. Croix* (Orono: University of Maine Press, 1950), note 61, p. 259. See also *ibid.*, pp. 107, 295.

<sup>24</sup>Johnson, "Historic Marysville," note 4, p. 733. In Milltown, Lockwood-Greene also built forty frame single and double tenement houses located near the mill.

<sup>25</sup>*St. Croix Courier*, May 3, 1881.

<sup>26</sup>*Moncton Daily Times*, November 29, 1881, March 13, 1883.

<sup>27</sup>*Monetary Times*, December 16, 1881; *Moncton Daily Times*, November 4, 1881. I could find no evidence that either British or American concerns invested in the company.

<sup>28</sup>*Moncton Daily Times*, April 9, 1884.

<sup>29</sup>Dana Johnson, "Historic Marysville," p. 700. The Moncton and St. Croix mills were joint stock companies, whereas Marysville was owned by a sole entrepreneur. In Moncton, no housing was provided for workers. In Milltown, the owners built forty frame single and double tenement housing located near the cotton mill. See note 4, p. 733.

<sup>30</sup>*Monetary Times*, May 11, 1883, June 15, 1883.

<sup>31</sup>Marsha Hay Snyder, "The Marysville Cotton Mill," in Canada, *Canadian Heritage Parks Canada* (National Historic Sites Directorate, Architectural History Branch, 1984), p. 323.

<sup>32</sup>Canada, *Report of the Royal Commission on the Relations of Capital and Labour* (Ottawa: Queen's Printer, 1889), pp. 455, 448, 462.